

Appl. No. 09/939,163
Request for Reconsideration Dated June 7, 2004
Reply to Office Action of March 5, 2004

• • REMARKS/ARGUMENTS • •

The Official Action of October 3, 2003 has been thoroughly studied. Accordingly, the following remarks are believed to be sufficient to place the application into condition for allowance.

Claims 1-13 are pending in this application.

Claims 1, 3, 5, 7-9 and 11-13 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,274,218 to Shimizu.

Claims 4 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Shimizu in view of U.S. Patent No. 5,479,335 to Colbert.

Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Shimizu in view of U.S. Patent No. 5,490,846 to Ellis et al.

The Examiner has relied upon Shimizu as disclosing a body fluid absorbent panel 2 for a sanitary article that comprises a fibrous web having a plurality of openings 6 and barriers surrounding and defining openings 6. The Examiner states that the body fluid absorbent panel 2 of Shimizu comprises a shape holding layer 11 formed from a plurality of thermoplastic synthetic resin fibers and a body fluid retaining layer 12.

The Examiner states that the shape holding layer 11 and body fluid retaining layer 12 have a surface pattern defined by the barriers that are coextensive, as shown in figures 1 and 2.

The Examiner further states that the fibers of the shape holding layer 11 are hot welded

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together, that the fibers of the body fluid retaining layer 12 are hot welded together, and that the shape holding layer 11 and the body fluid retaining layer are hot welded to each other along an interface, which hot welding inherently provides strength to the layer and therefore helps them resist collapsing under pressure.

The Examiner has not addressed the limitation in applicants' independent claims 1 and 13 that the body fluid retaining layer is "formed from a plurality of thermoplastic synthetic resin fibers which are mixed with an absorbent material." (Note, dependent claim 2 which includes further limitations on the absorbent material has not been addressed or rejected in the Official Action).

Shimizu does not teach the incorporation of an absorbent material into layer 12 (the Examiner's "body fluid retaining layer").

The lower or second fibrous layer 12 of Shimizu is placed "so as to be in contact with the absorbent core 4" as discussed at column 2, lines 66-67. The topsheet 2 of Shimizu which is made of the upper fibrous layer 11 and the lower fibrous layer 12 is designed to "rapidly transfer" body fluids into absorbent core 4.

As will be explained, Shimizu's concern with rapidly transferring body fluids from topsheet 2 into absorbent core precludes the incorporation of absorbent materials into the lower fibrous layer 12.

Accordingly, Shimizu does not anticipate or otherwise render obvious applicants' claimed invention which in part requires that the body fluid retaining is "formed from a plurality of thermoplastic synthetic resin fibers which are mixed with an absorbent material."

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At column 3, lines 8-18 Shimizu teaches that:

The second fibrous layer 12 is also formed by a plurality of thermoplastic synthetic fibers, each having a fineness of 1~10 deniers, mechanically entangled or heat-sealed together, more preferably provided in the form of a nonwoven fabric, in any case, with a basis weight of 10~100 g/m² and a density corresponding to at least 1.3 times of the density of the first fibrous layer 11. The second fibrous layer 12 is hydrophobic and may be used in the hydrophobic state, but, more preferably, used after it has been treated to have a hydrophilicity higher than the hydrophilicity of the first fibrous layer 11.

Although Shimizu teaches the thermoplastic fibers of the second or lower fibrous layer can be hydrophilic or hydrophobic, Shimizu does not teach that the second or lower fibrous layer is “formed from a plurality of thermoplastic synthetic resin fibers which are mixed with an absorbent material” as required by applicants’ independent claims 1 and 13.

It is important to note the mechanism Shimizu relies upon to rapidly transfer body fluid through the topsheet 2 and into the absorbent core 4. As described at column 3, lines 30-52:

The topsheet 2 constructed as has been described above advantageously enables rapid transfer of the body fluids from the first fibrous layer 11 in which both the hydrophilicity and the density are relatively low towards the second fibrous layer 12 in which both the hydrophilicity and the density are relatively high and thereby facilitates the upper surface of the topsheet 2 to be maintained in a dry state. The amount of body fluids having been absorbed by the second fibrous layer 12 is then partially absorbed by the absorbent core 4 underlying the second fibrous layer 12 and the rest laterally spreads within the second fibrous layer 12 before being absorbed by the absorbent core 4. In the proximity of the respective apertures 6, the body fluids transfer in the direction along which the density gradient increases, i.e., from the upper surface to the lower surface of the topsheet 2 and further toward the absorbent core 4. In this manner, the body fluids tend to transfer from the upper surface towards the lower surface of the topsheet 2 and further towards the absorbent core 4, preventing the body fluids from staying on the upper surface of the topsheet 2 for a long time and thereby ensuring that the upper surface of the topsheet 2 can rapidly restore to its dry state.

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As taught by Shimizu body fluid which is transferred from the upper fibrous layer to lower layer is transferred to the absorbent core in a manner by which first a portion of the fluid is transferred from the lower fibrous layer 12 into the absorbent core 4 and then the remaining fluid is spread out within the lower fibrous layer before being transferred into the absorbent core. So in effect, all the body fluid is transferred from the topsheet (upper and lower fibrous layers) into the absorbent core.

In order to function properly, it is clear that Shimizu excludes having an absorbent material mixed into the thermoplastic fibers of the lower layer. If such were not the case and an absorbent material was mixed into the lower fibrous layer, the absorbent material would absorb and retain body fluids rather than transfer the body fluids into the absorbent core.

A careful and accurate reading of Shimizu reveals that the topsheet, including the upper fibrous layer and the lower fibrous layer is designed and configured to transfer body fluids to and into the underlying absorbent core.

Accordingly, there is no need to incorporate an absorbent material into the lower fibrous layer of Shimizu. Moreover, it is submitted that doing so would destroy the express function of the topsheet and therefore destroy the function and teachings of Shimizu.

As held by the Board of Patent Appeals and Interferences in *Ex parte Hartmann*:

References cannot properly be combined if effect would destroy invention on which one of reference patents is based. 186 USPQ 366 (PTO Bd App 1974)

Applicants submit that the holding of *Ex parte Hartmann* is applicable in the present

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situation; because it would destroy the fluid transfer function required my Shimizu to incorporate and mix an absorbent material into the thermoplastic fibers of the lower fibrous layer 12.

The Examiner has relied upon Colbert as teaching a fibrous web comprising a plurality of openings surrounding barriers and a second panel 4, also comprising a plurality of openings surrounded by barriers placed upon the first panel such that the second panes 4 divides the openings of the first panel.

Colbert is directed to an absorbent device that has a low fluid "wet-back" and good surface cleanliness and resistance to staining. The structure depicted in Fig. 3 of Colbert comprises a first film or net layer 2 and an underlying film or net 4.

The film or net layers 2 and 4 of Colbert are disclosed as being formed from a number of possible materials at column 4, line 43 through column 5, line 32, none of which can be considered as comprising a fibrous web or a fibrous assembly as required by applicant's claimed panels.

The film or nets of Colbert function to physically inhibit the flow of fluid to the surface of hygienic absorbent devices.

It is submitted that in Colbert it is not just the arrangement or manner in which the film layers overlap that provides the wet-back function, but also the physical and chemical properties of the film.

The Examiner has taken the position that in view of the teachings of Colbert it would have been obvious to "place a second panel upon the first panel of Shimizu....to create a structure with smaller openings than either of the individual panels."

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The Examiner's position fails to consider that if two of the topsheets 2 of Shimizu were overlapped they would fail to provide the density gradient required by Shimizu and the corresponding fluid transfer function.

Shimizu prevents fluid from flowing from the absorbent core to the topsheet and therefore does not require the web-back films of Colbert or any configuration thereof.

Moreover, there is no motivation or suggestion within either Shimizu or Colbert which supports the Examiner's stated goal of making the apertures of Shimizu smaller. If there were some motivation within the teachings of the prior art it would be more likely obvious to make the apertures smaller without overlapping two topsheets.

The Examiner has relied upon Ellis et al. as teaching a body fluid absorbent panel having a compression resilience of at least 60%.

Ellis et al. teaches that the "fibrous nonwoven web of the present invention is used as a surge layer disposed between the body side liner and the absorbent core."

It is not seem how the teachings of the surge layer in Ellis et al. suggest that the layers of Shimizu should have a compression resilience of at least 60%.

Rather it appears that the Examiner has relied upon applicants' own teaching of a compression resilience of at least 60% to locate this teaching in Ellis et al. and has fabricated motivation not taught or suggested by the prior art in an attempt to combine the teachings of Ellis et al. with Shimizu.

Note, Shimizu does not mention any problems with their articles collapsing.

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Therefore, there is no motivation to combine the teachings of Ellis et al. with Shimizu "so that the panel does not collapse during use" as the Examiner states.

Based upon the above distinctions between the prior art relied upon by the Examiner and the present invention, and the overall teachings of prior art, properly considered as a whole, it is respectfully submitted that the Examiner cannot rely upon the prior art as required under 35 U.S.C. §102 as anticipating applicants' claimed invention.

Moreover, the Examiner cannot rely upon the prior art as required under 35 U.S.C. §103 to establish a *prima facie* case of obviousness of applicants' claimed invention.

It is, therefore, submitted that any reliance upon prior art would be improper inasmuch as the prior art does not remotely anticipate, teach, suggest or render obvious the present invention.

It is submitted that the claims, as now amended, and the discussion contained herein clearly show that the claimed invention is novel and neither anticipated nor obvious over the teachings of the prior art and the outstanding rejection of the claims should hence be withdrawn.

Therefore, reconsideration and withdrawal of the outstanding rejection of the claims and an early allowance of the claims is believed to be in order.


It is believed that the above represents a complete response to the Official Action and reconsideration is requested.

If upon consideration of the above, the Examiner should feel that there remain outstanding issues in the present application that could be resolved; the Examiner is invited to contact applicants' patent counsel at the telephone number given below to discuss such issues.

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To the extent necessary, a petition for an extension of time under 37 CFR §1.136 is hereby made. Please charge the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 12-2136 and please credit any excess fees to such deposit account.

Respectfully submitted,


Michael S. Gzybowski
Reg. No. 32,816

BUTZEL LONG
350 South Main Street
Suite 300
Ann Arbor, Michigan 48104
(734) 995-3110

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